

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended): A method of generating ions, comprising:

heating an ion source material composed of indium iodide (InI) and having a particle size larger than 1 mm and not larger than 5 mm at a temperature of not lower than 275°C and not higher than 380°C ~~to produce an ion beam current of not less than 2μA effective~~ to generate a vapor of said indium iodide (InI); and

generating indium (In) ions by discharging said vapor, to produce an ion beam current of not less than 2μA.

2. (Canceled):

3. (Canceled):

4. (Canceled):

5. (Currently amended): A method of irradiating ions, comprising:

~~generating indium (In) and iodine (I) ions in an ion generation method according to claim 4~~ heating an ion source material composed of indium iodide (InI) and having a particle size larger than 1 mm and not larger than 5 mm at a temperature of not lower than 275°C and not higher than 380°C to generate a vapor of said indium iodide (InI); and

generating indium (In) ions by discharging said vapor, to produce an ion beam current of not less than 2μA.; and

selectively irradiating said indium (In) ions onto a substrate to be processed.

6. (Canceled):

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

7. (Canceled):
8. (Canceled):
9. (Canceled):
10. (Canceled):
11. (Canceled):
12. (Canceled):
13. (Canceled):
14. (Canceled):
15. (Canceled):
16. (Canceled):
17. (Canceled):
18. (Canceled):
19. (Canceled):
20. (Canceled):

21. (Previously Presented): The method according to claim 1, wherein said heating an ion source material comprises heating said indium iodide (InI) at a temperature of not lower than 300°C and not higher than 380°C to generate said vapor of said indium iodide (InI).

22. (Currently amended): A method of generating ions, comprising:

heating an ion source material composed of indium iodide (InI), provided in a longitudinal tall and wide oven provided outside of an arc chamber, to generate a vapor of said indium iodide (InI); and

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

generating indium (In) ions by discharging said vapor in said arc chamber, wherein a filament is provided on one side surface of said arc chamber, and a reflecting counter electrode is provided on a second side surface of said arc chamber opposite to said one side surface ~~to form an arc in conjunction with said filament~~, and a gas inlet for said vapor is provided on one face of the arc chamber, said one face being between said one and said second side surfaces and perpendicular thereto, and is configured to introduce said vapor generated in said oven into said chamber ~~almost perpendicularly to said arc~~.

23. (Canceled):

24. (Canceled):

25. (Currently amended): The method according to claim 22, wherein said ion source material has a particle ~~shape and a particle size of said ion source material~~ not less larger than 1 mm and not ~~more~~ larger than 5 mm.

26. (New): A method of generating ions, comprising:

heating an ion source material composed of indium iodide (InI) and filled in a tall and narrow oven provided outside of an arc chamber at a temperature of not lower than 275°C and not higher than 380°C, to generate a vapor of said indium iodide (InI), wherein said ion source material has a particle size larger than 1 mm and not larger than 5 mm; and

generating indium (In) ions by discharging said vapor, to produce an ion beam current of not less than 2 μ A, wherein a filament is provided on one side surface of said arc chamber, and a reflecting counter electrode is provided on the other side surface of said arc chamber opposite to said one side surface, and a gas inlet for said vapor is

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

provided on one face of the arc chamber, said one face being between said one and the other side surfaces and perpendicular thereto, and is configured to introduce said vapor generated in said oven into said chamber.

27. (New): A method of irradiating ions, comprising:

heating an ion source material composed of indium iodide (InI) and filled in a tall and narrow oven provided outside of an arc chamber at a temperature of not lower than 275°C and not higher than 380°C, to generate a vapor of said indium iodide (InI), wherein said ion source material has a particle size larger than 1 mm and not larger than 5 mm;

generating indium (In) ions by discharging said vapor, to produce an ion beam current of not less than 2μA, wherein a filament is provided on one side surface of said arc chamber, and a reflecting counter electrode is provided on the other side surface of said arc chamber opposite to said one side surface, and a gas inlet for said vapor is provided on one face of the arc chamber, said one face being between said one and the other side surfaces and perpendicular thereto, and is configured to introduce said vapor generated in said oven into said chamber, and

selectively irradiating said indium (In) ions onto a substrate to be processed.

28. (New): The method according to claim 26, wherein said heating an ion source material comprises heating said indium iodide (InI) at a temperature of not lower than 300°C and not higher than 380°C, to generate said vapor of said indium iodide (InI).

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.400.4000
Fax 202.400.4400
www.finnegan.com